

Listing of Claims

1. (Currently Amended) System for processing a series of image frames representing a cardiac cycle, at least comprising input or data collection means for collecting the series of image frames, a memory inter alia for storing and retrieving said series of image frames, a processor for processing the frames, and display means, whereby in use the processor processes the frames to identify from said series of images a frame or frames representing a pre-determined phase of the cardiac cycle, ~~characterized in that~~wherein the processor compares images from said series of image frames and establishes a measure of identity between such frames, whereby the processor applies said measure of identity to identify the phase of the cardiac cycle pertaining to such frames.
2. (Currently Amended) System according to claim 1, ~~characterized in that~~wherein the processor compares consecutive frames from the series of images, and selects from the series of images the frames showing the highest value of the measure of identity as pertaining to the systolic resting-phase and the diastolic resting-phase of the cardiac cycle.
3. (Currently Amended) System according to claim 2, ~~characterized in that~~wherein the processor compares pairs of consecutive frames.
4. (Currently Amended) System according to claim 1, ~~characterized in that~~wherein the processor compares each frame from said series with every other frame from the series of images, and selects a first frame and a second frame from said series of images showing the lowest value of said measure of identity, whereby the first frame and the second frame are identified to pertain to the systolic resting-phase and the diastolic resting-phase of the cardiac cycle.
5. (Currently Amended) System according to ~~any one of~~ claims 1-4, ~~characterized in that~~wherein the processor compares the frames by executing a cross-correlation function with regard to such frames, whereby it assigns the value resulting from said cross-correlation as representing the said measure of identity.

6. (Currently Amended) System according to ~~any one of the previous claims 1, characterized in that~~wherein the processor compares the image frames with reference to and restricted to a pre-selected area of the images on the frames.

7. (Currently Amended) System according to claim 6, ~~characterized in that~~wherein the pre-selected area is the right coronary artery and its immediate surroundings.

8. (Currently Amended) Software for use in conjunction with a processor for processing a series of image frames in order to identify from said series of images a frame or frames representing a pre-determined phase of the cardiac cycle, ~~characterized in that~~wherein it includes an algorithm to establish a measure of identity between frames of the series of image frames, and to determine from said measure of identity the phase of the cardiac cycle to which the frames relate.

9. (Original) Data carrier embodied with software according to claim 8.

10. (Currently Amended) Method for processing a series of image frames representing a cardiac cycle in order to identify from said series of images a frame or frames representing a pre-determined phase of the cardiac cycle, ~~characterized in that~~wherein images from said series of image frames are compared to establish a measure of identity between such frames and that the measure of identity is used to identify the phase of the cardiac cycle pertaining to such frames.

11. (Currently Amended) Method according to claim 10, ~~characterized in that~~wherein consecutive frames from the series of images are compared and that the frames within the series of images are selected that show the highest value of the measure of identity as pertaining to the systolic resting-phase and the diastolic resting-phase of the cardiac cycle.

12. (Currently Amended) Method according to claim 10, ~~characterized in that~~wherein each frame from the series of image frames is compared with every other frame from the series, and a first frame and a second frame from said series of images showing the lowest value of said measure of identity are selected, whereby the first frame and the second frame are identified to pertain to the systolic resting-phase and the diastolic resting-phase of the cardiac cycle.